



**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) ~~[[ (1) ]]~~ An isolated polypeptide (a) consisting of the amino acid sequence of SEQ ID NO: 2 ~~or SEQ ID NO: 4, or [[ (2) ]]~~ (b) ~~an isolated polypeptide~~ exhibiting a potassium-dependent sodium-calcium exchange activity and consisting of an amino acid sequence in which 1 to 5 amino acids in total are substituted, deleted, inserted, and/or added at one or plural portions in the amino acid sequence of SEQ ID NO: 2 ~~or SEQ ID NO: 4~~.
2. (Canceled)
3. (Previously presented) The isolated polypeptide according to claim 1, wherein the sodium-calcium exchange activity is a reverse sodium-calcium exchange activity.
4. (Currently amended) An isolated polynucleotide encoding the polypeptide according to claim 1 or 3, ~~any one of claims 1 to 3 or 18~~.
5. (Original) An expression vector comprising the polynucleotide according to claim 4.
6. (Original) A cell transfected with the expression vector according to claim 5.
7. (Currently amended) A method for producing the isolated polypeptide according to ~~any one of claims 1 to 3 or 18~~ claim 1 or 3, the method comprising expressing a

polynucleotide encoding the polypeptide in a cell transfected with an expression vector comprising the polynucleotide.

8. (Currently amended) A method for screening for an inhibitor of the polypeptide according to ~~any one of claims 1 to 3 or 18~~ claim 1 or 3, comprising the steps of:

(a) introducing into a cell an isolated polynucleotide encoding the polypeptide of claim 1 or 3,

[[ (1) ]] (b) bringing a cell expressing the polypeptide into contact with a substance to be tested,

[[ (2) ]] (c) analyzing whether or not a potassium-dependent sodium-calcium exchange activity in the polypeptide is inhibited, and

[[ (3) ]] (d) selecting [[a]] the substance which that inhibits the potassium-dependent sodium-calcium exchange activity in the polypeptide.

9. (Currently amended) A method for screening for an inhibitor of leukocyte activation, comprising the steps of:

(a) introducing into a cell an isolated polynucleotide encoding a polypeptide

(i) consisting of the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4; or

(ii) exhibiting a potassium-dependent sodium-calcium exchange activity and consisting of an amino acid sequence in which 1 to 5 amino acids in total are substituted, deleted, inserted, and/or added at one or plural portions in the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4,

[[[1]]] (b) bringing a cell expressing the polypeptide ~~according to any one of claims 1 to 3 or 18~~ into contact with a substance to be tested,

[[[2]]] (c) analyzing whether or not a potassium-dependent sodium-calcium exchange activity in the polypeptide is inhibited, and

[[[3]]] (d) selecting [[a]] the substance ~~that~~ which inhibits the potassium-dependent sodium-calcium exchange activity in the polypeptide and inhibits leukocyte activation.

10. (Currently amended) A method for screening for a therapeutic agent for postischemic reperfusion injury and/or an inflammatory disease, comprising the steps of:

- (a) introducing into a cell an isolated polynucleotide encoding a polypeptide  
(i) consisting of the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4; or  
(ii) exhibiting a potassium-dependent sodium-calcium exchange activity and consisting of an amino acid sequence in which 1 to 5 amino acids in total are substituted, deleted, inserted, and/or added at one or plural portions in the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4,

[[[1]]] (b) bringing a cell expressing the polypeptide ~~according to any one of claims 1 to 3 or 18~~ into contact with a substance to be tested,

[[[2]]] (c) analyzing whether or not a potassium-dependent sodium-calcium exchange activity in the polypeptide is inhibited, and

[[ (3) ] ] (d) selecting ~~[[a]] the substance that which~~ inhibits the potassium-dependent sodium-calcium exchange activity in the polypeptide.

11. (Currently amended) A process for manufacturing a pharmaceutical composition for treating postischemic reperfusion injury and/or an inflammatory disease, comprising the steps of:

(a) introducing into a cell an isolated polynucleotide encoding a polypeptide  
(i) consisting of the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4; or  
(ii) exhibiting a potassium-dependent sodium-calcium exchange activity  
and consisting of an amino acid sequence in which 1 to 5 amino acids in  
total are substituted, deleted, inserted, and/or added at one or plural  
portions in the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4,

[[ (1) ] ] (b) bringing a cell expressing the polypeptide ~~according to any one of~~  
~~claims 1 to 3 or 18~~ into contact with a substance to be tested,

[[ (2) ] ] (c) analyzing whether or not a potassium-dependent sodium-calcium exchange activity in the polypeptide is inhibited, ~~[[and]]~~

(d) selecting the substance that inhibits the potassium-dependent sodium-calcium exchange activity in the polypeptide, and

[[ (3) ] ] (e) preparing a medicament containing the substance.

12-18. (Cancelled)

19. (New) The method according to claim 9, wherein the polypeptide consists of (a) the amino acid sequence of SEQ ID NO: 2, or (b) the amino acid sequence in which 1 to 5 amino acids in total are substituted, deleted, inserted, and/or added at one or plural portions in the amino acid sequence of SEQ ID NO: 2.

20. (New) The method according to claim 10, wherein the polypeptide consists of (a) the amino acid sequence of SEQ ID NO: 2, or (b) the amino acid sequence in which 1 to 5 amino acids in total are substituted, deleted, inserted, and/or added at one or plural portions in the amino acid sequence of SEQ ID NO: 2.

21. (New) The process according to claim 11, wherein the polypeptide consists of (a) the amino acid sequence of SEQ ID NO: 2, or (b) the amino acid sequence in which 1 to 5 amino acids in total are substituted, deleted, inserted, and/or added at one or plural portions in the amino acid sequence of SEQ ID NO: 2.